

EXHIBIT E

**UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF CALIFORNIA**

Epic Games, Inc.,

v.

Civil Action No. 4:20-CV-05640-YGR

Apple Inc.,

REBUTTAL EXPERT REPORT OF DOMINIQUE HANSENS, PH.D.

March 15, 2021

IV. Summary of Conclusions

A. Summary of Conclusions from the iOS App Survey and iOS Fortnite Survey

17. I designed and conducted two online surveys in accordance with standard survey procedures and best survey practices, as described in **Section V**.
18. In the first survey, where the population of interest (“target population”) was iOS App Store Users (“iOS App Survey”), I find that the vast majority of survey respondents (or 92 percent of iOS App Store Users) regularly used at least one type of Other Electronic Devices (*i.e.*, smartphones and tablets other than iOS Devices, personal computers, and gaming consoles and handheld gaming devices) in the last 12 months.¹⁵ I also find that 81 percent of iOS App Store Users regularly used in the last 12 months at least one type of Other Electronic Devices

¹⁵ I provide a discussion in ¶¶ 45–46, regarding the framing of device usage in the surveys as devices that respondents regularly used in the last 12 months. This framing allowed respondents to narrow the relevant universe of devices to a set that they could easily identify as those they actually used or those they could have used for gaming activity (and exclude devices that they would rarely or occasionally use for that purpose). Due to the natural variation in the frequency of device use for a given respondent and/or a given device, this framing also allowed flexibility for respondents to be able to identify devices appropriately based on what “regular use” would mean for each of them and for each of their relevant devices. I pretested both surveys and confirmed that pretest participants did not have any difficulty identifying the devices they regularly used in the last 12 months. Overall, the use of frequency of devices that the pretest participants identified as regularly using covered a range from daily to a few times a month.

that is not manufactured by Apple. The share of iOS App Store Users who regularly used or had access to Other Electronic Devices is even larger, with nearly all respondents in the iOS App Survey (99 percent) indicating they regularly used or could have used in the last 12 months at least one type of Other Electronic Devices. Further, 41 percent of iOS App Store Users indicated that they regularly used gaming consoles and/or handheld gaming devices in the last 12 months, and 61 percent indicated that they regularly used or could have used gaming consoles and/or handheld gaming devices in the last 12 months. In **Section VI**, I discuss in detail the iOS App Survey questions, the survey implementation, and its results.

19. Similarly, in the second survey, where the target population was iOS Fortnite Players (“iOS Fortnite Survey”), I find that the vast majority of survey respondents (or 97 percent of iOS Fortnite Players) regularly used at least one type of Other Electronic Devices in the last 12 months. I also find that 94 percent of iOS Fortnite Players regularly used in the last 12 months at least one type of Other Electronic Devices that is not manufactured by Apple. As in the case of the iOS App Store Users, the share of iOS Fortnite Players who regularly used or had access to Other Electronic Devices is larger, with nearly all respondents in the iOS Fortnite Survey (99 percent) indicating that they regularly used or could have used at least one type of Other Electronic Devices in the last 12 months. Further, 79 percent of iOS Fortnite Players indicated that they regularly used gaming consoles and/or handheld gaming devices, and 90 percent indicated that they regularly used or could have used gaming consoles and/or handheld gaming devices in the last 12 months. Finally, I find that 94 percent of iOS Fortnite Players played games on at least one type of Other Electronic Devices in the last 12 months. In **Section VII**, I discuss in detail the iOS Fortnite Survey questions, the survey implementation, and its results.

B. Summary of Rebuttal Conclusions Regarding the Rossi Report

20. Professor Rossi did not follow established survey research best practices in designing his survey and the results of his survey are biased and unreliable. Any analyses (such as Professor Rossi's price elasticity calculations) that rely on these biased data are themselves biased and unreliable.

21. The main goal of Professor Rossi's survey was to measure a "behavioral change" in response to a hypothetical price change scenario.¹⁶ To achieve this goal, Professor Rossi asked respondents in his survey to make predictions about how they might have changed their behavior in a hypothetical situation 30 days ago. In **Section VIII**, I discuss how respondents' predictions about their behavior under such a hypothetical scenario are likely to differ from their actual behavior and explain why Professor Rossi's results are unreliable. In addition, I discuss that even under an assumption that the survey results were reliable (which they are not), the results are specific to the one hypothetical price increase scenario Professor Rossi tested in his survey (a five percent increase of in-app purchases and subscriptions made over the past 30 days) and to the narrow target population he defined. As a result, the survey's results cannot be generalized to any price increase scenario other than the one tested or to the broader population of iOS Device users who made in-app purchases or paid for subscriptions. Further, contrary to established survey best practices, Professor Rossi's survey instrument was not pretested properly. Professor Rossi conducted pretests of his very first survey instrument and identified several problems with respondents' understanding and ability to properly respond to his survey. Based on this information, Professor Rossi made multiple substantial revisions to his survey instrument. However, he did not conduct pretests of any of the subsequent versions of his

¹⁶ Rossi Report, ¶ 13.

survey, including his final survey instrument. As a result, Professor Rossi provides no evidence that he solved any of the problems that he originally identified. In fact, as shown in **Section IX**, the data generated across multiple versions of the survey instrument suggest that he did not solve these problems, and his finalized survey instrument was still susceptible to respondent confusion and generated unreliable responses.

22. In **Section IX**, I show that Professor Rossi's survey included multiple confusing and leading questions, and therefore generated biased and unreliable responses. In particular, Professor Rossi failed to provide the necessary context for respondents to properly answer the questions; he employed a backward-looking hypothetical that was vague and confusing; he framed the questions in a manner inconsistent with the real world; and he failed to account for a number of known sources for survey biases.

23. Finally, I discuss in **Section X** that Professor Rossi's purported tests to establish representativeness of his survey sample are not meaningful. Specifically, Professor Rossi compares the distribution of an arbitrary portion of his survey sample (it is neither the incoming respondents to Professor Rossi's survey nor the respondents who qualified for and completed his survey) to an arbitrary benchmark (the sample of 469 respondents used in an RBC Capital Markets survey conducted via *SurveyMonkey* by a securities analyst) that he has no basis to assume is reliable and accurately reflects the device ownership of the relevant population.